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Our Case No. 9793/115
Weickmann Ref. 11051P US-WO-2/WW
RDC Ref. RDID 0089 D US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Hans-Peter Josel et al.

Serial No. 09/801,157

Filing Date: March 7, 2001

For: Oligomeric Carrier Molecules with Defined Incorporated Marker Groups and Haptens

Examiner Steven C. Tizio

Group Art Unit No. 1627

RESPONSE

Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Responsive to the Office Action mailed January 22, 2002, Applicants respectfully request reconsideration in light of the following amendment and remarks.

AMENDMENT

In th Sp cification:

Please make the following amendments to the specification:

Please replace the paragraph bridging pages 5 and 6 with:

-- When using the conjugates according to the invention that contain 1 – 10 hapten molecules and a defined number of marker or solid phase binding groups as antigens in an immunological method of detection it is surprisingly possible to achieve considerably higher sensitivity and precision and at the same time a reduced lower detection limit compared to known monomeric and multimeric antigens. Moreover the conjugates according to the invention can be constructed in a simple manner by solid phase synthesis e.g., a peptide solid phase synthesis. For these monomeric units, e.g. amino acid derivatives, that are derivatized by a hapten molecule or a marker or solid phase binding group can be incorporated at predetermined positions. In addition it is possible to selectively incorporate additional haptens or marker or solid phase binding groups after completion of the solid phase synthesis at positions of the carrier chain at which monomers are located having free functional groups. This enables a defined and reproducible incorporation of hapten molecules and marker or solid phase binding groups into the conjugate. The distances between individual groups on the conjugate can be exactly defined and varied if necessary. The signal quenching can be kept low by selecting the distance of the marker groups on the conjugate so that the signal strength increases proportionally to the number of marking groups. A defined spatial orientation of marker groups also contributes to the improvement of the signal strength e.g. in the case of helical carriers. The distances between marker groups are therefore preferably 3-6 or/and 13-16 monomeric units in the case of helical carriers e.g., single-stranded or double-stranded nucleic acids. --

In the Claims:

Please rewrite claim 6 as follows:

6. (Once Amended) The process as claimed in claim 2, wherein the reactive side groups are primary amino groups and the protective groups are selectively cleavable.

SUPPORT FOR AMENDMENT

The changes in the amended portion of the specification and in rewritten claim 6 relative to the previous versions are shown in the Appendix entitled "Version with Markings to Show Changes Made" (attached herewith), wherein bracketing is used to identify deleted material and underlining is used to identify added material.

The amendments to the specification and to claim were made solely to correct typographical errors. No new matter has been added. Upon entry of this Response, claims 1-8 remain present and active in the application.